

ABSTRACT OF THE DISCLOSURE

A gear system having a rotatory input is isolated while subjected to test for torsional and linear vibration. The gear system is installed on an isolation support that affords multiple degrees of freedom with respect to a base, whereby torsional and linear vibrations are analyzed. The resonance of the isolation support can be configured to simulate a vehicle, or to be significantly different therefrom. The gear system is clamped in a manner that permits the multiple degrees of freedom with respect to the base, via an engagement arrangement that secures the gear system to the isolation support. Rotatory energy is provided as torque without significant axial or transaxial bias. Processes for signal analysis enable “pass/fail” determinations with respect to torsional vibration, linear vibration, noise of the system under test, and the presence of bumps or nicks in the gear system.